

REMARKS

Claims 19-20 are pending in this application. By this Amendment, the specification is amended to replace the original Abstract with a substitute Abstract. No new matter is added. The listing of claims in this amendment includes the proper pending claims 19 and 20.

The Office Action objects to the Abstract because it is asserted that the abstract is drawn to reflect the invention as a "method" rather than the presently claimed apparatus. Applicants have attached on a separate page hereto a substitute Abstract to replace the original Abstract. Reconsideration and withdrawal of the objection to the Abstract is respectively requested.

The Office Action rejects claims 19 and 20 under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being obvious over Loan et al. (U.S. Patent No. 6,296,711). Claim 20 is also rejected under 35 U.S.C. 103(a) as being obvious over Loan et al. in view of Ke et al. (U.S. Patent No. 6,284,093) and Hasegawa et al. (U.S. Patent No. 5,554,249). Claims 19 and 20 are also rejected 35 U.S.C. 103(a) as being obvious over the newly cited Grill ("Plasma in Materials Fabrication"). These rejections are traversed.

Applicants previously amended claims 19-20 (in the June 7, 2004, Amendment) to require "a source of an etching gas comprising chlorine gas, oxygen gas and one of either hydrogen gas or hydrogen chloride gas." Thus, to anticipate or render obvious present claims 19-20, a reference (or combination of references) would have to teach or suggest a source of chlorine, oxygen and one of hydrogen or hydrogen chloride gases.

Loan et al. is directed to an "apparatus for chemical vapor deposition" (see line 1 of the Abstract).

The Office Action asserts that Loan et al. teaches an apparatus that "is used for dry etching process" (page 3, line 10, of the Office Action). However, Applicants can find no teaching or suggestion in Loan et al. directed to configuring the apparatus for dry etching. Applicants do note that Loan et al. appears to teach against configuring the apparatus for dry etching at column 37, lines 45-47, stating that damascene processing is used "due to the impracticality of dry-etching Cu" (emphasis added).

The Office Action further asserts that Loan et al. teaches that "[m]eans are provided in the apparatus for introducing such reactants (hydrogen gas) or process-assisting agents [through] a separate gas line (col. 30, lines 18-25). Applicants are unsure of what the Examiner is referring to since column 30, lines 18-25, only contains part of Table 1.

In any case, Loan et al. nowhere teach or suggest a dry-etching apparatus configured with a source of chlorine, oxygen and one of hydrogen or hydrogen chloride gases, as would be required to anticipate or render obvious present claims 19-20.

Thus, as Loan et al. do not teach or suggest a source of either of these two combinations of gases, Applicants respectfully submit that claims 19 and 20 are clearly distinguishable from Loan et al.

Ke et al. is cited to show four electromagnets which surround an etching chamber. However, Ke et al. nowhere teach or suggest a dry-etching apparatus configured with a source of either of the two combinations of gases as required by present claim 20.

Similarly, Hasegawa et al., which is cited to show a two jointed robot, do not teach or suggest a dry-etching apparatus configured with a source of either of the two combinations of gases as required by present claim 20.

The Examiner asserts that "Grill does not specifically teach the usage of applicant's claimed process in his apparatus [but that Grill's apparatus] is fully capable of conducting Applicants' claimed process" (page 7, lines 3-6). However, present claims 19-20 are not directed to a process. Also present claims 19-20 are not directed to an apparatus that is capable of conducting a process, but rather directed to an apparatus that is configured with a source of chlorine, oxygen and one of hydrogen or hydrogen chloride gases. Thus, the source of chlorine, oxygen and one of hydrogen or hydrogen chloride gases is a claimed part of the invention of present claims 19-20.

As Grill nowhere teaches or suggests such a dry-etching apparatus configured with a source of chlorine, oxygen and one of hydrogen or hydrogen chloride gases, Applicants respectfully request that present claims 19-20 would not have been obvious over Grill.

For at least the above reasons, reconsideration and withdrawal of the rejections of claims 19 and 20 under 35 U.S.C. 102(e) and under 35 U.S.C. 103(a) are respectfully requested.

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues. In the event this paper is not being timely filed, Applicants

respectfully petition for an appropriate extension of time. Any additional fees may be charged to Counsel's Deposit Account 01-2300, **referencing attorney docket number 101136-00103**. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300, making reference to Attorney Docket No. **101136-00103**.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is fluid and cursive, with a horizontal line extending from the end of the name.

Robert K. Carpenter
Registration No. 34,794

Customer No. 004372
ARENT FOX PLLC
1050 Connecticut Avenue, N.W.,
Suite 400
Washington, D.C. 20036-5339
Tel: (202) 857-6000
Fax: (202) 638-4810

RKC/tdd

Attachment: Substitute Abstract